PLAN COMMISSION

To: City Council
From: Planning Department
Date: August 3, 2009
Re: **Proposed addition to the Logansport Zoning Ordinance establishing a Small and Micro Wind Energy Conversion Ordinance**.

Source of Proposed Amendment:

Logansport/Cass County Planning Department Staff

Zoning Ordinance Section:

Article 2: Definition: Section 201: Wind Energy Conversion System
Article 3: District Regulations: Section 307: General Provisions and Exceptions to Height Regulations
Article 5: DEVELOPMENTAL STANDARDS: Section 522, Wind Energy Conservation System Farms

Proposed Language Change:

Section 201 Definitions:

Wind Energy Conversion System (WECS). The equipment that converts and then stores or transfers energy from the wind into usable forms of energy and includes any base, blade, foundation, generator, nacelle, rotor, wind tower, transformer, turbine, vane, wind farm collection system, wire, or other component used in the system.

Micro Wind System (MWS). A building-mounted WECS that has a nameplate capacity (manufacturer's rating) of 10 kilowatts or less, and projects no more than 15' above the highest point of the roof.

Small Wind System (SWS). A WECS that has a nameplate capacity (manufacturer's rating) less than or equal to 100 kilowatts per wind tower, and a total height of 140' or less, and a swept area of 40' or less.

Swept area. The diameter of the least circle encompassing all blades for a *WECS*.

Total height. Means the distance from the rotor blade at its highest point to the top surface of the WECS foundation.

Section 307 General Provisions and Exceptions to Height Regulations

F. Wind Energy Conversion Systems (as defined)

Development Standards

522. WIND ENERGY CONVERSION SYSTEM FARM STANDARDS

522.01 DESIGN AND INSTALLATION (General)

A. Design Safety Certification

1. Wind Energy Conversion System (WECSs) shall conform to applicable industry standards. Applicant shall submit certificate(s) of design compliance that wind turbine manufacturers have obtained from Underwriters Laboratories, Det Norske Veritas, Germanishcher Lloyd Wind Energie, or an equivalent third party.

2. Following the granting of siting approval under this Ordinance, a Professional Engineer shall certify, as part of the building permit application that the foundation and tower design of the WECS is within accepted professional standards, given local soil and climate conditions.

3. All WECS must be installed in compliance to the manufacture's installation manual or by a professional.

B. Controls and Brakes

All WECS shall be equipped with a redundant braking system. This includes both aerodynamic over speed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode. Stall regulation shall not be considered a sufficient braking system for over speed protection.

C. Electrical Components

1. All electrical components of the WECS shall conform to applicable local, state, and national codes, and relevant national and international standards.

2. Electrical Collection Cables

All WECS electrical collection cables between each WECS shall be located underground unless they are located on public or utility rights-of-way or with prior City approval. All transmission lines that are buried should be at a depth consistent with or greater than local utility and telecommunication underground lines standards or as negotiated with the land owner or the land owner's designate until the same reach the property line or a substation adjacent to the property line.

D. Color

1. Towers and blades shall be painted white or gray or another non-reflective, unobtrusive color.

2. The Applicant for the WECS shall comply with all applicable FAA requirements.

E. Warnings

1. A reasonably visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and Substations.

2. Visible, reflective, colored objects, such as flags, reflectors, or tape shall be placed on the anchor points of guy wires and along the guy wires up to a height of not less than 15 feet from the ground.

F. Climb Prevention

All WECS Tower designs must include features to deter climbing or be protected by anti-climbing devices such as:

1. Anti-climbing devices 15 feet vertically from the base of the WECS Tower

2. if climbing apparatus is located on the exterior of tower a 6' fence or other anti-climbing devices must be erected unless climbing apparatus is located at least 12'above the ground level.

H. Utility Interconnection

No WECS shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected generator.

The WECS, if interconnected to a utility system, shall meet the requirements for interconnection and operate as set forth in the electrical utility's then-current service regulations applicable to WECS.

I. Waste Management

All solid waste whether generated from supplies, equipment, parts, packaging, or operation or maintenance of the facility, including old parts and equipment, shall be removed from the site in a timely manner consistent with industry standards. All HAZARDOUS WASTE generated by the operation and maintenance of the facility, including but not limited to lubricating materials, shall be handled in a manner consistent with all local, state and federal rules and regulations.

J. Lighting

1. Except with respect to lighting required by the FAA all lighting shall be shielded so that no glare extends substantially beyond the boundaries of the Wind farm Facilities.

2. Any WECS thereof declared to be unsafe by the Zoning Administrator by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal in accordance with the procedures set forth in the City Ordinances governing the removal of Nuisances.

K. Compliance with Additional Regulations:

Nothing in this Ordinance is intended to preempt other applicable state and federal laws and regulations.

L. Interference

If after construction of the WECS, the Owner or Operator receives a written complaint related to interference with local broadcast residential television, telecommunication, communication or microwave transmissions, the Owner or Operator shall take reasonable steps to respond to minimize the complaint.

M. Signs

All signs, other than the manufacturer's or installer's identification, appropriate warning signs, or owner identification on a wind generator, tower, building, or other structure associated with a WECS shall be prohibited.

N. Temporary Meteorological Towers (Met Towers)

Met Towers are permitted in AG, OS, LR1, AB, I1, and I2 zoning districts as long as they following the following standards. Met towers in all other districts will require special exception approval.

a. The minimum separation distance between a Met Tower and all surrounding property lines, overhead utility or transmission lines, other electrical substations, neighboring meteorological towers, public right-of-ways and primary communications towers shall be no less than the total height of the Met Tower. This is measured from the base of each Met Tower.

b. All temporary met towers must be removed 12 months after the issuance of a permit. If tower(s) are not removed, removal would fall under the decommissioning plan for Small and Micro Wind Systems.

522.02 Small (SWS) or Micro (MWS) Wind System

SWS are permitted in AG and AB zoning districts. SWS in OS, LR1, I1, and I2 zoning district will require special exception approval. MWS are permitted in all zoning districts. The following standards apply for both the Small and Micro Wind Systems

A. Noise and Vibration

SWS and MWS shall not exceed 60 dBA, as measured at the closest neighboring dwelling.

B. Blade Clearance

The minimum distance between the ground and any protruding blade(s) utilized on a SWS shall be fifteen (15) feet, as measured at the lowest point of the arc of the blades. The minimum distance shall be increased as necessary to provide for vehicle clearance in locations where over-sized vehicles might travel.

C. Tower Height

1. Tower heights 65ft to 140ft must received special exception if located within an AG and AB zoning district.

2. No more than one (1) SWS is permitted in the AG and AB zoning districts, without receiving special exception approval.

3. For property sizes between ½ and 1 acre the SMW height shall be limited to 80ft. For property sizes of 1 acre or more, towers should be 140ft or less, except as imposed by FAA regulations.

D. Setbacks

The minimum separation distance between a SMS and all surrounding property lines, overhead utility or transmission lines, other electrical substations, neighboring WECS or neighboring meteorological towers, public right-of-ways and primary communications towers shall be no less than the total height of the SWS. This is measured from the base of each SWS.

E. System Condition

The applicant shall maintain the SWS or MWS in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and security measures.

F. Decommissioning Plan

Any SWS or MWS which has reached the end of its useful life or has been abandoned shall be removed. A SWS or MWS shall be considered abandoned when it fails to operate for one year. Upon a Notice of Abandonment issued by the Zoning Administrator, the SWS or MWS owner will have 30 days to provide sufficient evidence that the system has not been abandoned. If the SWS or MWS is considered abandoned or in disrepair the petitioner must remove the SWS or MWS within 12 month or the City shall have the authority to enter the owner's property and remove the system at the owner's expense.

Justification:

- To assure that any development and production of wind-generated electricity in Logansport is safe and effective;
- To facilitate economic opportunities for local residents;
- To provide a regulatory scheme for the construction and operation of Wind Energy Facilities in the city, subject to reasonable restrictions, this will preserve the public health and safety

Staff Recommendation:

The approval of the Small and Micro Wind Energy Conversion System Ordinance from the Logansport Plan Commission and City Council.

ADDED LANGUAGE IS UNDERLINED ~~DELETED LANGUAGE IS STRUCK THROUGH~~